

The following Listing of Claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

Claims 1-18 (Cancelled)

19. (Previously Presented) The method of claim 23, wherein
said heating the precursor material in the crucible comprises inductively heating the crucible, heat from the crucible being conducted to the precursor material.
20. (Previously Presented) The method of claim 23, wherein
said heating the precursor material in the crucible comprises heating the precursor material to a temperature in the range of about 1600 to about 1800°C.
21. (Previously Presented) The method of claim 23, wherein
said method is conducted at a pressure in the range of about 0.1 to about 3 torr.
22. (Previously Presented) The method of claim 23, wherein
said contacting the vaporized precursor material comprises contacting the vaporized precursor material with nitrogen.
23. (Currently Amended) A method for producing silver nano-particle material, comprising:

providing a precursor material to a crucible on a continuous basis, the crucible being housed in a furnace;

heating the precursor material in the crucible to produce a vaporized precursor material;

contacting the vaporized precursor material with a process gas in a mixing region to form at least a first portion of silver nano-particle material in the mixing region, the mixing region being in the furnace;

drawing a mixture of said first portion, said vaporized precursor material and process gas into an inlet end of a conduit, the process gas cooling the vaporized precursor material to precipitate at least a second portion of said silver nano-particle material in a carrier stream in said conduit; and

transporting said first portion and said second portion from said conduit in said carrier stream;

separating said silver nano-particle material from the carrier stream by filtering; and
collecting said silver nano-particle material.

24. (Previously Presented) The method of claim 23, wherein
said providing the precursor material to the crucible comprises providing metallic silver to the crucible.

25. (Previously Presented) The method of claim 23, wherein
the process gas cooling the vaporized precursor material to precipitate said silver nano-particle material in a carrier stream occurs in the conduit.

26. (Cancelled)
27. (Previously Presented) The method of claim 23, further comprising collecting said silver nano-particle material.
28. (New) The method of claim 23, wherein the mixing region is between the inlet end of said conduit and said crucible.
29. (New) A method for producing silver nano-particle material, comprising:
providing a precursor material to a crucible on a continuous basis, the crucible being housed in a furnace;
heating the precursor material in the crucible to produce a vaporized precursor material;
contacting the vaporized precursor material with a process gas in a mixing region;
drawing a mixture of vaporized precursor material and process gas into an inlet end of a conduit, the inlet end having a hood-like portion, and the process gas cooling the vaporized precursor material to precipitate said silver nano-particle material in a carrier stream;
discharging the carrier stream from an outlet of the conduit into a non-liquid medium;
and
separating said silver nano-particle material from the carrier stream.
30. (New) The method of claim 29, wherein

the crucible and the hood-like portion define the mixing region.

31. (New) The method of claim 29, further comprising
preventing the silver nano-particle material from entering a vacuum pump.
32. (New) The method of claim 31, wherein
the preventing the silver nano-particle material from entering a vacuum pump comprises
filtering.
33. (New) A method for producing silver nano-particle material, comprising:
providing a precursor material to a crucible on a continuous basis, the crucible being
housed in a furnace;
heating the precursor material in the crucible to produce a vaporized precursor material;
defining a mixing region with the crucible and a hood-like portion formed from a portion
of an inlet end of a conduit;
contacting the vaporized precursor material with a process gas in the mixing region;
drawing a mixture of vaporized precursor material and process gas into the inlet end of
the conduit, the process gas cooling the vaporized precursor material to precipitate said silver
nano-particle material in a carrier stream; and
separating said silver nano-particle material from the carrier stream.